Drawing Sheet 1 of 19
FIXED-FREQUENCY BEAM-STEERABLE LEAKY-WAVE Title:

MICROSTIP ANTENNA

Inventor: Karam Michael Noujeim Appl. No.: Unassigned Docket No.: ANRI-8055US0

Filing Date: Herewith Telephone No.: 415-362-3800

Attorney: Stephen R. Bachmann

Express Mail Mailing Label No.: EV 326 482 731 US

<u>100</u>

Top view

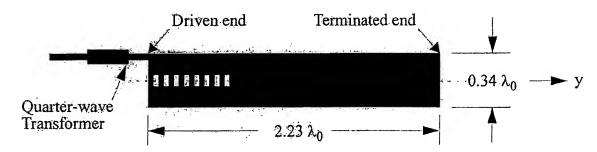


FIG. 1a Prior Art

Drawing Sheet 2 of 19
FIXED-FREQUENCY BEAM-STEERABLE LEAKY-WAVE
MICROSTIP ANTENNA
Komm Michael Strain Title:

Inventor: Karam Michael Noujeim

Appl. No.: Unassigned Docket No.: ANRI-8055US0 Attorney: Stephen R. Bachmann Filing Date: Herewith Telephone No.: 415-362-3800

Express Mail Mailing Label No.: EV 326 482 731 US

<u>150</u>

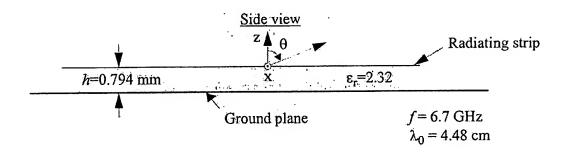


FIG. 1b Prior Art

Drawing Sheet 3 of 19 FIXED-FREQUENCY BEAM-STEERABLE LEAKY-WAVE

MICROSTIP ANTENNA Inventor: Karam Michael Noujeim

Appl. No.: Unassigned
'Docket No.: ANRI-8055US0

Filing Date: Herewith Telephone No.: 415-362-3800

Attorney: Stephen R. Bachmann

Express Mail Mailing Label No.: EV 326 482 731 US

<u>200</u>

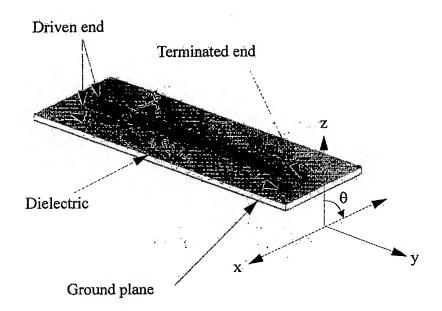


FIG. 2 Prior Art

Drawing Sheet 4 of 19
FIXED-FREQUENCY BEAM-STEERABLE LEAKY-WAVE
MICROSTIP ANTENNA Title:

Inventor: Karam Michael Noujeim Appl. No.: Unassigned

Filing Date: Herewith Telephone No.: 415-362-3800

Docket No.: ANRI-8055US0 Attorney: Stephen R. Bachmann

Express Mail Mailing Label No.: EV 326 482 731 US

<u>300</u>

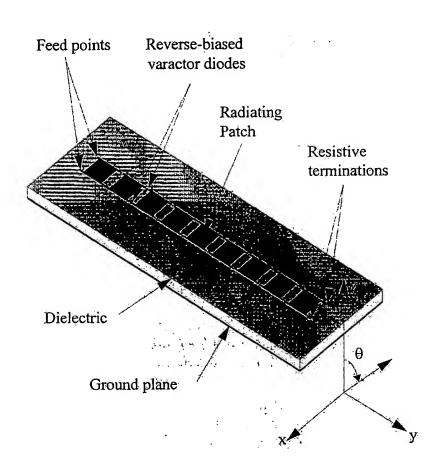


FIG. 3 Prior Art

Drawing Sheet 5 of 19
FIXED-FREQUENCY BEAM-STEERABLE LEAKY-WAVE
MICROSTIP ANTENNA Title:

Inventor: Karam Michael Noujeim

Filing Date: Herewith Telephone No.: 415-362-3800 Appl. No.: Unassigned

Docket No.: ANRI-8055US0 Attorney: Stephen R. Bachmann

Express Mail Mailing Label No.: EV 326 482 731 US

<u>400</u>

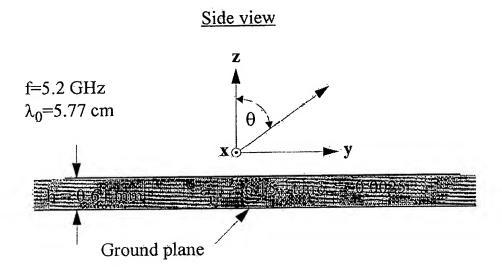


FIG. 4a Prior Art

Drawing Sheet 6 of 19
FIXED-FREQUENCY BEAM-STEERABLE LEAKY-WAVE Title:

MICROSTIP ANTENNA

Inventor: Karam Michael Noujeim Appl. No.: Unassigned Docket No.: ANRI-8055US0 Filing Date: Herewith Telephone No.: 415-362-3800

Attorney: Stephen R. Bachmann
Express Mail Mailing Label No.: EV 326 482 731 US

<u>450</u>

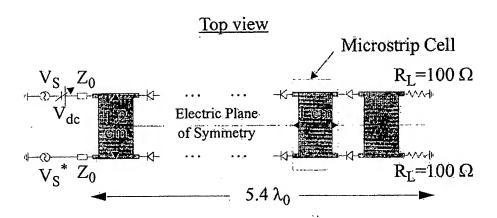


FIG. 4b Prior Art

Drawing Sheet 7 of 19
FIXED-FREQUENCY BEAM-STEERABLE LEAKY-WAVE
MICROSTIP ANTENNA Title:

Inventor: Karam Michael Noujeim
Appl. No.: Unassigned Filing Date
Docket No.: ANRI-8055US0 Telephone
Attorney: Stephen R. Bachmann
Express Mail Mailing Label No.: EV 326 482 731 US Filing Date: Herewith Telephone No.: 415-362-3800

<u>500</u>

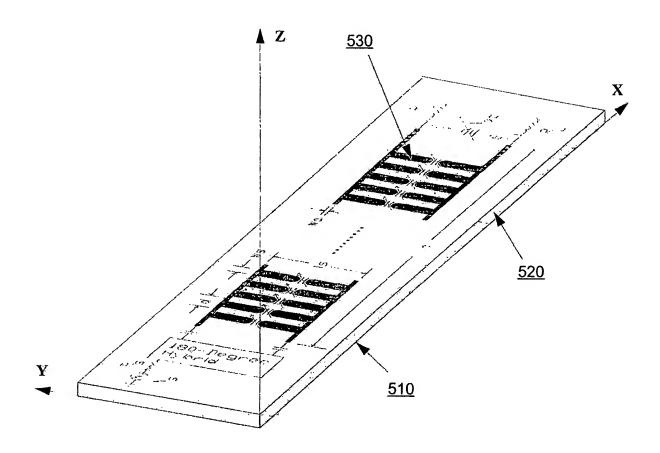


FIG. 5

Drawing Sheet 8 of 19
FIXED-FREQUENCY BEAM-STEERABLE LEAKY-WAVE Title:

MICROSTIP ANTENNA Inventor: Karam Michael Noujeim

Appl. No.: Unassigned Docket No.: ANRI-8055US0 Filing Date: Herewith Telephone No.: 415-362-3800

Attorney: Stephen R. Bachmann Express Mail Mailing Label No.: EV 326 482 731 US

<u>600</u>

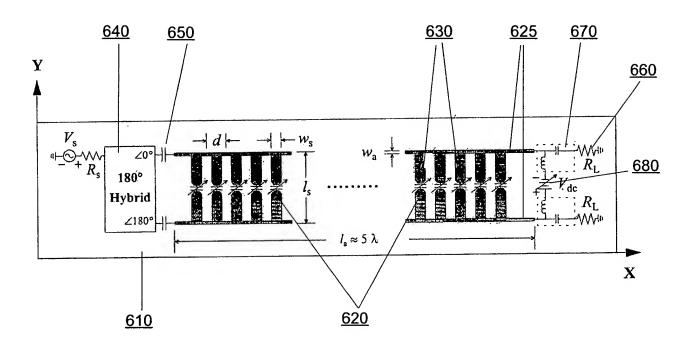
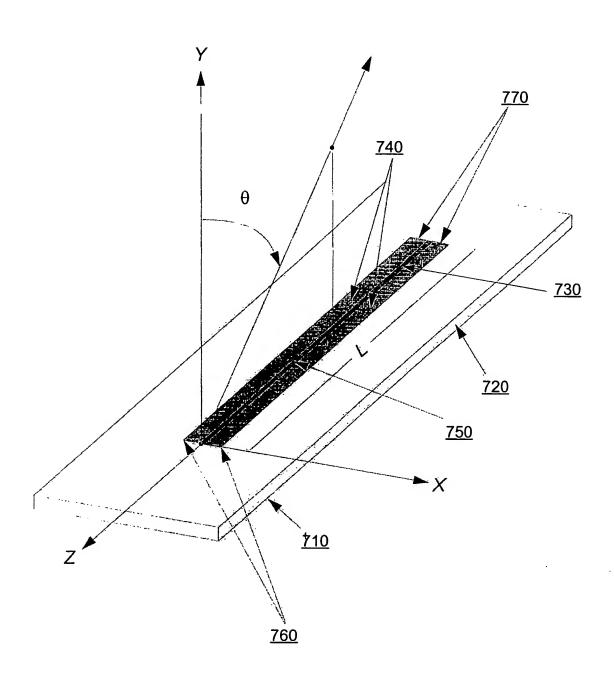


FIG. 6

Drawing Sheet 9 of 19
Title: FIXED-FREQUENCY BEAM-STEERABLE LEAKY-WAVE MICROSTIP ANTENNA
Inventor: Karam Michael Noujeim

Appl. No.: Unassigned Filing Date
Docket No.: ANRI-8055USO Telephone
Attorney: Stephen R. Bachmann
Express Mail Mailing Label No.: EV 326 482 731 US Filing Date: Herewith Telephone No.: 415-362-3800

<u>700</u>



<u>FIG. 7</u>

Drawing Sheet 10 of 19
FIXED-FREQUENCY BEAM-STEERABLE LEAKY-WAVE Title:

MICROSTIP ANTENNA Inventor: Karam Michael Noujeim

Appl. No.: Unassigned Docket No.: ANRI-8055US0

Filing Date: Herewith Telephone No.: 415-362-3800

Attorney: Stephen R. Bachmann

Express Mail Mailing Label No.: EV 326 482 731 US

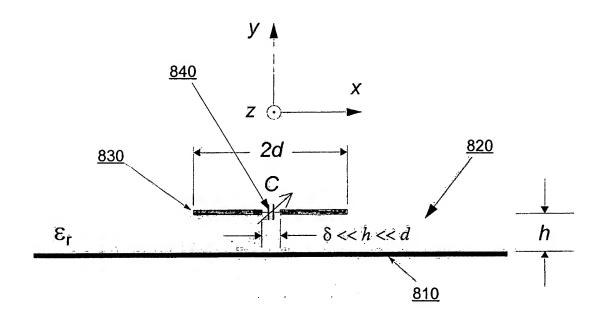


FIG. 8a

Drawing Sheet 11 of 19
FIXED-FREQUENCY BEAM-STEERABLE LEAKY-WAVE
MICROSTIP ANTENNA Title:

Inventor: Karam Michael Noujeim Appl. No.: Unassigned

Filing Date: Herewith Telephone No.: 415-362-3800

Docket No.: ANRI-8055USO
Attorney: Stephen R. Bachmann
Express Mail Mailing Label No.: EV 326 482 731 US

<u>850</u>

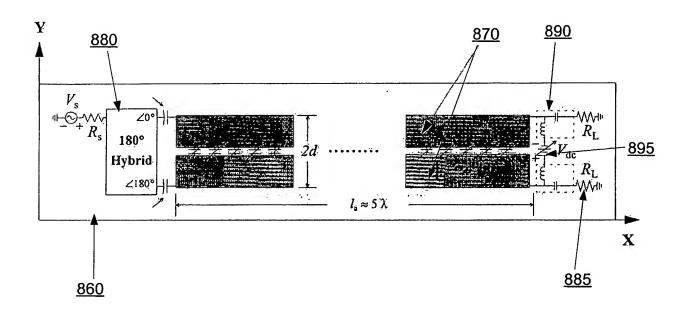


FIG. 8b

Drawing Sheet 12 of 19
FIXED-FREQUENCY BEAM-STEERABLE LEAKY-WAVE
MICROSTIP ANTENNA
Kamp Michael St. 1 Title:

Inventor: Karam Michael Noujeim Appl. No.: Unassigned Filing Date: Herewith Telephone No.: 415-362-3800 Docket No.: ANRI-8055US0

Attorney: Stephen R. Bachmann

Express Mail Mailing Label No.: EV 326 482 731 US

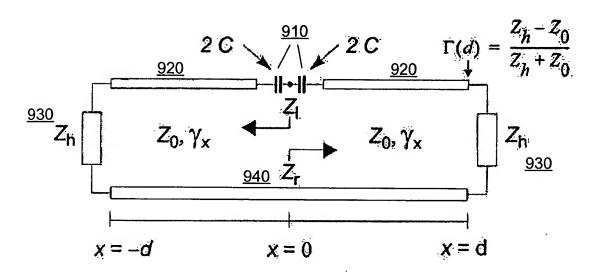


FIG. 9

Title: FIXED-FREQUENCY BEAM-STEERABLE LEAKY-WAVE MICROSTIP ANTENNA
Inventor: Karam Michael Noujeim

Appl. No.: Unassigned Docket No.: ANRI-8055US0 Filing Date: Herewith Telephone No.: 415-362-3800

Attorney: Stephen R. Bachmann Express Mail Mailing Label No.: EV 326 482 731 US

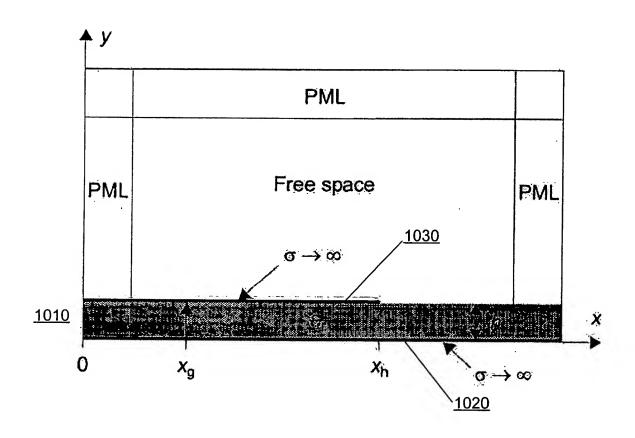


FIG. 10

Drawing Sheet 14 of 19
FIXED-FREQUENCY BEAM-STEERABLE LEAKY-WAVE
MICROSTIP ANTENNA Title:

Inventor: Karam Michael Noujeim

Filing Date: Herewith Telephone No.: 415-362-3800 Appl. No.: Unassigned Docket No.: ANRI-8055US0

Attorney: Stephen R. Bachmann

Express Mail Mailing Label No.: EV 326 482 731 US

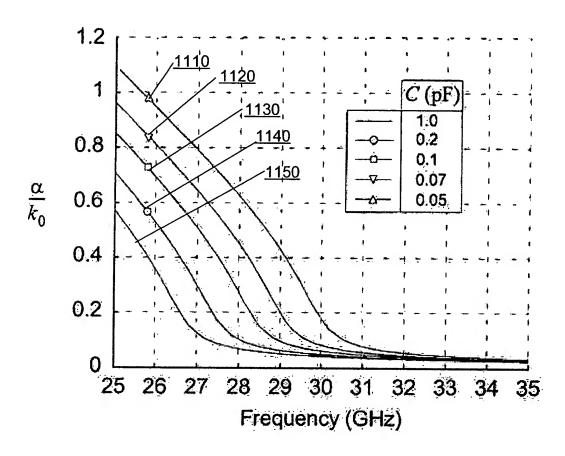


FIG. 11

Drawing Sheet 15 of 19
FIXED-FREQUENCY BEAM-STEERABLE LEAKY-WAVE

MICROSTIP ANTENNA Inventor: Karam Michael Noujeim

Appl. No.: Unassigned Docket No.: ANRI-8055US0

Filing Date: Herewith Telephone No.: 415-362-3800

Attorney: Stephen R. Bachmann

Express Mail Mailing Label No.: EV 326 482 731 US

<u>1200</u>

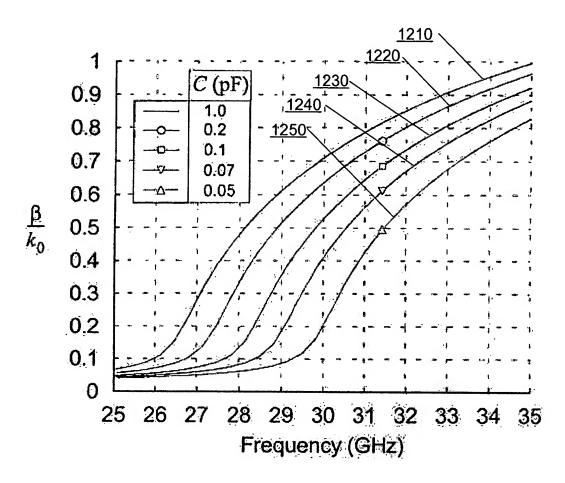


FIG. 12

Drawing Sheet 16 of 19
FIXED-FREQUENCY BEAM-STEERABLE LEAKY-WAVE Title:

MICROSTIP ANTENNA

Inventor: Karam Michael Noujeim Appl. No.: Unassigned Docket No.: ANRI-8055US0

Filing Date: Herewith Telephone No.: 415-362-3800

Attorney: Stephen R. Bachmann

Express Mail Mailing Label No.: EV 326 482 731 US

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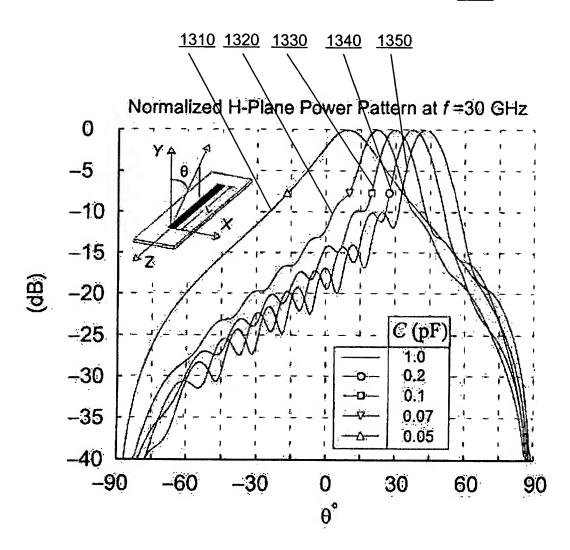


FIG. 13

Drawing Sheet 17 of 19
FIXED-FREQUENCY BEAM-STEERABLE LEAKY-WAVE Title:

MICROSTIP ANTENNA Inventor: Karam Michael Noujeim

Appl. No.: Unassigned Docket No.: ANRI-8055US0 Filing Date: Herewith Telephone No.: 415-362-3800

Attorney: Stephen R. Bachmann

Express Mail Mailing Label No.: EV 326 482 731 US

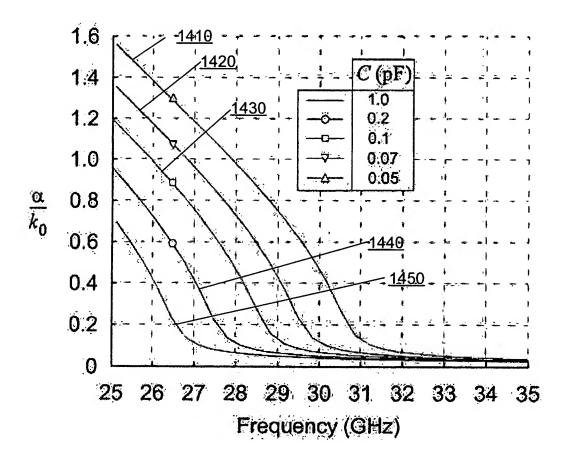


FIG. 14

Drawing Sheet 18 of 19 FIXED-FREQUENCY BEAM-STEERABLE LEAKY-WAVE MICROSTIP ANTENNA Title:

Inventor: Karam Michael Noujeim Appl. No.: Unassigned Docket No.: ANRI-8055US0

Filing Date: Herewith Telephone No.: 415-362-3800

Attorney: Stephen R. Bachmann

Express Mail Mailing Label No.: EV 326 482 731 US

<u>1500</u>

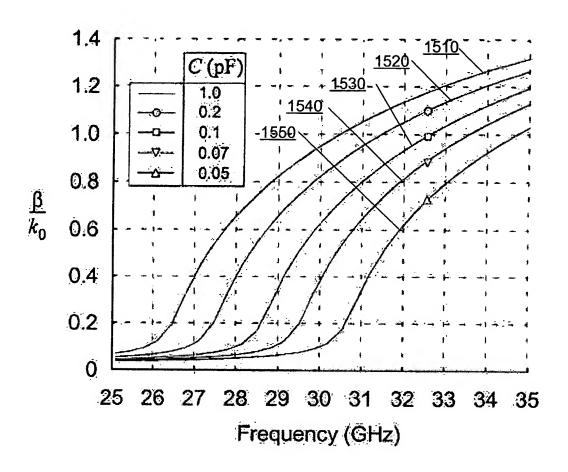


FIG. 15

Drawing Sheet 19 of 19
FIXED-FREQUENCY BEAM-STEERABLE LEAKY-WAVE Title:

MICROSTIP ANTENNA Inventor: Karam Michael Noujeim

Appl. No.: Unassigned Docket No.: ANRI-8055US0 Filing Date: Herewith Telephone No.: 415-362-3800

Attorney: Stephen R. Bachmann

Express Mail Mailing Label No.: EV 326 482 731 US

<u>1600</u>

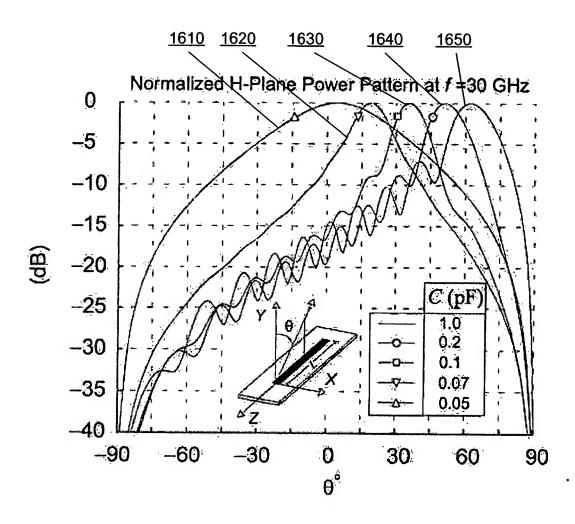


FIG. 16